



Our winner is:

!!

# TIC TAC TOE

## Inverse Functions

My name: \_\_\_\_\_  
My partner's name: \_\_\_\_\_  
Date: \_\_\_\_\_ Period: \_\_\_\_\_



One person picks a box they would like to claim

Both of you evaluate BOTH problems

If the original person is correct, they get the square.

If they are wrong, the opponent gets the box. YOU MUST JUSTIFY YOUR ANSWER!!

Verify that  $f$  and  $g$  are inverse functions.

$$f(x) = -3x + 6 \quad g(x) = \frac{-1}{3}x + 2$$

Verify that  $f$  and  $g$  are inverse functions.

$$f(x) = \frac{3}{5}x - 15$$

$$g(x) = \frac{5}{3}x + 25$$

Verify that  $f$  and  $g$  are inverse functions.

$$f(x) = x - 2 \quad g(x) = x + 2$$

Verify that  $f$  and  $g$  are inverse functions.

$$f(x) = \frac{2(x+6)}{3} + 10$$

$$g(x) = \frac{3}{2}x - 21$$

Find an equation for the inverse.

$$h(x) = 2x^3 + 5$$

Verify that  $f$  and  $g$  are inverse functions.

$$f(x) = \frac{1}{2}x - 4 \quad g(x) = 2x + 8$$

Verify that  $f$  and  $g$  are inverse functions.

$$f(x) = x^3 \quad g(x) = \sqrt[3]{x}$$

Verify that  $e$  and  $d$  are inverse functions.

$$e(x) = \frac{(x-10)^2}{4}$$

$$d(x) = 4\sqrt{x} + 10$$

Find an equation for the inverse.

$$f(x) = \sqrt{x+1}$$



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Find an equation for the inverse.

$$f(x) = 3 - 2x$$

Verify that  $f$  and  $g$  are inverse functions.

$$f(x) = 2x + 7 \quad g(x) = \frac{1}{2}x - \frac{7}{2}$$

Find an equation for the inverse.

$$g(x) = x^2 + 3$$

Verify that  $f$  and  $g$  are inverse functions.

$$f(x) = 1 - x \quad g(x) = 1 - x$$

Find an equation for the inverse.

$$f(x) = \sqrt[3]{5x - 3}$$

Find an equation for the inverse.

$$f(x) = \sqrt{x}$$

Find an equation for the inverse.

$$h(x) = x^2 + 7, \quad x \geq 0$$

Find an equation for the inverse.

$$g(x) = 4x^2$$

Verify that  $f$  and  $g$  are inverse functions.

$$f(x) = \frac{1}{2}x^3 \quad g(x) = \sqrt[3]{2x}$$